Benjamin Stockton, PhD

Postdoctoral Fellow

Education

2019-2024 **PhD in Statistics**, *University of Connecticut*, Storrs, CT.

- Dissertation: Extending Multiple Imputation to the Analysis of Incomplete Spatially and Temporally Distributed Angular Data
- Dissertation Committee: Ofer Harel, Nalini Ravishanker, and Jun Yan
- GPA: 3.913
- Courses: Applied Statistics I & II, Mathematical Statistics I & II, Linear Models I & II, Design of Experiments, Inference I & II, Probability I & II, Intro. to Nonparametric Statistics, Intro. to Time Series, Bayesian Data Analysis, Intro. to Multivariate Statistics, Bioinformatics, Intro. to Machine Learning, Data Visualization and Communication

2016-2019 **Bachelor of Science in Mathematics (Emphasis in Statistics)**, *University of Wisconsin-Whitewater*, Whitewater, WI.

- Minor in Computer Science
- GPA: 3.87
- Courses: Calculus III, Linear Algebra, Intro. to Real Analysis, Abstract Algebra I, Intro. to Topology, Applied Statistics, Mathematical Statistics I & II, Regression Analysis, Intro. to C++, Intermediate Programming, Data Structures, Programming Languages, Algorithms, Assembly Programming

2015-2016 **Bachelor of Science (Undeclared)**, *University of Wisconsin-Madison*, Madison, WI.

- GPA: 3.65
- Courses: Calculus I & II

Publications

Published & In Press Publications

1. Gupta, S., Stockton, B., & Harel, O. (2025). Adapting Multiple Imputation for Compositional Survey Data. *American Journal of Undergraduate Research*, *22*, 13–29. https://doi.org/10.33697/ajur.2025.146
2. Sidi, Y., Stockton, B., & Harel, O. (2024). Non-inferiority Clinical Trials: Treating Margin as Missing Information. *The New England Journal of Statistics in Data Science*, 1–8. https://doi.org/10.51387/24-NEJSDS57
3. Stockton, B., Strange, C. C., & Harel, O. (2023). Now You See It, Now You Don't: A Simulation and Illustration of the Importance of Treating Incomplete Data in Estimating Race Effects in Sentencing. *Journal of Quantitative Criminology*, *40*, 563–590. https://doi.org/10.1007/s10940-023-09577-w

New York University Grossman School of Medicine
+1 (920)757-4901 • *benjamin.stockton.stats@gmail.com*
benjamin-stockton.github.io • *benjamin-stockton-329507160*
benjamin-stockton

Refereed Chapters

1. Stockton, B., Gupta, S., Harel, O., & Sinharay, S. (Ed.). (2025). *Data Confidentiality, Differential Privacy, and Statistical Disclosure Control. Encyclopedia of Social Measurement* (2nd Edition). Elsevier.

Preprints

1. Stockton, B., Santacatterina, M., Mandal, S., Cleland, C. M., Hade, E. M., Illenberger, N., Meropol, S., Troxel, A. B., Petkova, E., Yu, C., & Tarpey, T. (2026). *Clarifying the role of placebo response classification in the analysis of the Sequential Parallel Comparison Design. arXiv:2511.19677.* https://doi.org/10.48550/arXiv.2511.19677

In Progress Publications

1. Stockton, B., & Harel, O. (2026). (Submitted to American Journal of Epidemiology: Commentary on Resurrecting Complete-Case Analysis: A Defense – The loss of information remains unresolved. *American Journal of Epidemiology.*
2. Stockton, B., & Harel, O. (2025). *(In Progress) Multiple Imputation for Analyzing Spatial Data with Incomplete Angular Predictors.*
3. Stockton, B., & Harel, O. (2025). *(Submitted to Journal of Applied Statistics: Under Third Review) Incomplete Angular Time Series Imputation with a Projected Normal Autoregressive Process and Exogenous Predictors.*
4. Strange, C. C., Stockton, B., Zvonkovich, J., & Harel, O. (2025). *(In Progress) Multiple Imputation Using Pattern-mixture Modeling to Assess the Sensitivity of Race/Ethnicity Effect Estimates in Sentencing Given Non-ignorable Incomplete Data.*
5. Stockton, B., Kahn, L., Mehta-Lee, S., & Hade, E. (2025). *(In Progress) Interrupted Count Time Series Analysis with Nuisance Interruptions.*
6. Stockton, B., Kahn, L., Mehta-Lee, S., & Hade, E. (2025). *(In Progress) Assessing the Impacts of Texas's Six-Week Abortion Ban on Maternal Morbiity Using Electronic Health Records.*

Work and Research Experience

October 2024 - Present

Postdoctoral Fellow, *Division of Biostatistics, Department of Population Health, New York University Grossman School of Medicine*, New York, NY.

- Working with Dr. Erinn M. Hade, I developed a causal inference method based on Bayesian interrupted time series analysis for public health policy analysis. We applied the method to estimate the impact of Texas's 2021 six-week abortion ban on maternal morbidity using aggregated electronic health records (EHR). I used the Stan probabilistic programming language to fit the models and conducted simulation studies and sensitivity analyses using the NYU High Performance Computing cluster (HPC).
- Working with a large group of collaborators headed by Dr. Andrea Troxel, we addressed a pre-existing concern with statistical complications when using the sequential parallel comparisons design. I used the potential outcomes framework from causal inference to illustrate issues with the design's estimators and estimands.
- I participated in team meetings for an ongoing implementation science trial for nutritional education for pregnant people with Dr. Hade serving as the lead statistician.

June 2021 - July 2024 **Research Assistant**, *University of Connecticut*, Storrs, CT.

- Supplemental Grant for NSF Grant # 2015320 which funded development of a model to classify bovid teeth fragments from hominid archeological site by species.
- The supplement funded my studies and research as an underrepresented minority Hispanic student. The research goal for the grant was to develop missing data methods in the context of directional data including developing Bayesian multiple imputation strategies for directional data in regression, time series, and spatio-temporal contexts.
- The models developed for this grant are written in R and Stan and validated through simulation study on the University of Connecticut High Performance Cluster (HPC).

June 2022 - Present **Interdisciplinary Projects**, *University of Connecticut*, Storrs, CT.

- A collaboration between my advisor, Ofer Harel, C. Clare Strange, assistant professor of criminology and justice studies at Drexel University, and myself where we illustrated the impacts of using complete case analysis for incomplete data analysis via simulation studies and sensitivity analyses on the impacts of racial identity in sentencing decisions.
- I finalized the manuscript and simulations developing an innovative approach to non-inferiority threshold size determination for non-inferiority clinical trials, closely related to sample size calculations for these trials, based on work initially started by Dr. Yulia Sidi during her dissertation and whom was also supervised by Dr. Ofer Harel.

June 2020 - July 2020 **Data Science Leadership Development Program Intern**, *Travelers Insurance Co.*, Hartford, CT.

- For the internship, I worked on a classification problem using XGBoost models and natural language processing using python and various machine learning packages such as pandas, numpy, scikit-learn, xgboost, and huggingface.

January 2018 - May 2019 **Undergraduate Research Assistant**, *Department of Mathematics, University of Wisconsin-Whitewater*, Whitewater, WI.

- Used College Algebra enrollment and course data to analyze how to more effectively place students in either standard or Moving Up sections using multiple measures.

May 2018 - July 2018 **Valparaiso University Mathematics REU Participant**, *Valparaiso University & NSF*, Valparaiso, IN.

- As part of a three person team, completed a research project on the optimal creditworthiness threshold of a bivariate distribution.

June 2017 - May 2019 **Undergraduate Research**, *Department of Mathematics, University of Wisconsin-Whitewater*, Whitewater, WI.

- Interdisciplinary research project between Mathematics, Computer Science, and Psychology Departments focused on developing a web application to analyze the progression of STEM majors to graduation at UW-Whitewater.

October 2016 - May 2017 **Undergraduate Research Assistant**, *Department of Mathematics, University of Wisconsin-Whitewater*, Whitewater, WI.

- Worked with Math department enrollment data to better understand what factors cause students to change majors and course paths.

August 2015-August 2016 **Student Hourly for the Survey of the Health of Wisconsin**, *School of Medicine and Public Health, University of Wisconsin-Madison*, Madison, WI.

- As a student hourly employee, assisted with administrative tasks required by the study.

Teaching

January 2024 - May 2024 **Teaching Assistant - Primary Instructor**, *Department of Statistics, University of Connecticut*, Storrs, CT.

- STAT 3025Q: Statistical Methods
- As primary instructor, I led instruction for this course for the semester including making slides, lecturing, creating assignments and exams from scratch, grading, and performing administrative duties for the course. I also developed an active learning strategy for the course involving regular in-class problem solving and discussion.

August 2019 - May 2021 **Teaching Assistant**, *Department of Statistics, University of Connecticut*, Storrs, CT.

- Fall 2019 and Spring 2020 - Teaching Assistant for STAT 1000Q : Introduction to Stats I with Instructor Robert Apruzese
- Fall 2020 and Spring 2021 - Teaching Assistant for STAT 1100Q : Elementary Concepts of Statistics with Instructor Kathleen McLaughlin
- For both of these courses, I led discussion sections involving reviewing material from each week's lectures, grading, proctoring quizzes and exams, and demonstrating statistical software for students.

September 2018 - May 2019 **Learning Assistant**, *Department of Mathematics, University of Wisconsin-Whitewater*, Whitewater, WI.

- Fall 2018 - Learning Assistant for Intro. to Applied Statistics for Dr. Khyam Paneru. I primarily assisted students with learning to use R and applying R to statistical analysis for a final project.
- Spring 2019 - Learning Assistant for Introduction to Real Analysis for Dr. Wesley Hough. I primarily served as a tutor and sat in on classes.

September 2016 - May 2018 **Tutor in the Math Learning Center**, *Department of Mathematics, University of Wisconsin-Whitewater*, Whitewater, WI.

- General tutor for courses including Pre-Algebra, Quantitative Reasoning, College Algebra, Finite Mathematics, Pre-Calculus, Calculus I, Calculus II, Calculus III, and Intro. to Statistics

Mentoring

August 2024 - Present **Graduate Student Mentor**, *University of Connecticut*, Storrs, CT.

- Mentoring Sana Gupta, now a doctoral student in statistics, through navigating early graduate school and finishing publishing her senior thesis.

September 2022 - May 2024 **Undergraduate Research Mentor**, *University of Connecticut*, Storrs, CT.

- Mentoring Sana Gupta, an undergraduate in statistics, on the research for her senior thesis analyzing survey responses on motivations for exercising conducted by Katherine Gnall, a doctoral student in psychology.

Presentations

2025 Joint Statistical Meetings (JSM) Contributed Paper. 'A Novel Imputation Method for Incomplete Angular Time Series with an Application to PM2.5 Air Pollution Analysis'

2025 Society of Perinatal Epidemiological Research (SPER) Poster Presentation. 'Maternal Health Following the 2021 Texas Six-Week Ban on Abortion'

2025 New England Statistical Symposium (NESS) Invited Session. 'Estimating Policy Effects with Interrupted Time Series Following a Nuisance Interruption'

2024 New England Statistical Symposium (NESS) Invited Session. 'A Novel Imputation Method for Incomplete Angular Time Series with an Application to PM2.5 Air Pollution Analysis'

2023 Student Workshop on Statistical Computing. 'Getting to Know Stan'

2023 New England Statistical Symposium (NESS) Invited Session. 'Multiple Imputation with Angular Covariates: Imputing Incomplete Angular Data with Projected Normal Regression'

2023 Eastern North American Region (ENAR) International Biometric Society Invited Session. 'Incomplete data in non traditional settings : Angles, Functions, and Shapes'

2018 National Conference on Undergraduate Research. Oral presentation on research from the project for evaluating undergraduate STEM student academic success'

2018 Indiana Mathematics REU Conference. Oral presentation on research on thresholds for credit-worthiness based on a bivariate distribution

Recognition & Awards

2023 Summer Fellowship Award. Department of Statistics, University of Connecticut

2016 - 2019 University of Wisconsin-Whitewater Dean's List. Each semester from Fall 2016 through Spring 2019

2018 'Best Use of Data' Poster Award. University of Wisconsin-Whitewater Assessment Day for undergraduate research project on the academic progress of STEM undergrads.

2018 Marion B. Schlicher Scholarship.

2017 CK Flanagan Scholarship.

2016 University of Wisconsin-Madison Dean's List. Spring 2016

2015 UW-Madison Fort Atkinson Alumni Chapter/Pellegrin Scholarship. Fort Atkinson Community Foundation

2015 Theodore W. Batterman Scholarship. Fort Atkinson Community Foundation

2010 Helen Rose Inspire-a-Dream Scholarship.

Workshops (Attended)

2023 Field of Dreams Conference presented by the Math Alliance.

2023 Joint Statistical Meetings (JSM) Diversity Mentoring Program.

2023 Eastern North American Region (ENAR) International Biometric Society Fostering Diversity Workshop.

2022 Field of Dreams Conference presented by the Math Alliance.

2022 Joint Statistical Meetings (JSM) Diversity Mentoring Program.

2022 Eastern North American Region (ENAR) International Biometric Society Fostering Diversity Workshop.

2021 Joint Statistical Meetings (JSM) Diversity Mentoring Program.

2021 Eastern North American Region (ENAR) International Biometric Society Fostering Diversity Workshop.

2019 Colorado Summer Institute in Biostatistics (CoSIBS). Colorado School of Public Health - Aurora, CO

Manuscript Reviewer

2024 BMC Medical Research Methodology.